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Before the
Federal Communications Commission
Washington, DC 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Wireless Communications Service)
)

CC Docket No. 96-²²⁹~~441~~

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COMMENTS OF BELL COMMUNICATIONS RESEARCH, INC.

Bell Communications Research, Inc. (hereafter "Bellcore"), strongly supports the Federal Communications Commission's (FCC or Commission) action to establish a new Wireless Communications Services (WCS) in the 2305-2320 and 2345-2360 MHz bands in the above-referenced docket. Bellcore respectfully submits the following brief comments on several of the Commission's proposals in the NPRM.

I. Permitted Services

Bellcore supports the Commission's proposal to allow a broad range of fixed and mobile services in the band 2305-2320 and 2345-2360 MHz. We believe that one of the most important services that can be provided in the band is portable access to the Internet. Thus our comments here are focused on helping to ensure that this service can be provided in an efficient and economical manner without constraining other uses of the spectrum.

Internet usage is continuing to grow at a phenomenal rate. It is projected that there will be more than 80 million users of the Internet in the United States alone by the year 2000. Without viable wireless alternatives, most of their Internet access would be over dial-up lines from fixed points using modems with transmission rates limited to

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perhaps 28.8 Kbps. However, it is expected that approximately 1/3 of the personal computers sold at that time will be portable in nature (i.e., “notebook” computers). Thus, portable access to the Internet, either as a supplement to wireline access or as a replacement for it, will become increasingly important to customers for both World Wide Web browsing as well as Internet telephony (i.e., the transmission of voice over the Internet as packets of data using the Internet Protocol).

Bellcore believes that technology has advanced to the point where it is technically and economically feasible to design and deploy a wireless system that is tailored to provide Internet access over wide areas (including homes, campuses, libraries, airports, etc.) at data rates comparable to the rates customers would experience over a wired ISDN-type connection. Such a system might packetize the data sent to and from customers to take advantage of the bursty nature of Internet traffic, thereby efficiently utilizing the radio resources. It might also transmit data over the air in an asymmetric fashion to reflect the fact that, for web browsing, the amount of data sent to customers is generally several times greater than that sent from customers. Thus, a system designed specifically for a supplement to wireline access to the Internet would have characteristics that are different from the systems being deployed for Personal Communications Service (PCS) which have been designed to principally support circuit-switched voice and data services. Since these differences have a significant impact on the data rates provided to users and the overall system economics, it is important that the Commission not restrict the services provided in this band nor dictate technical standards for operation beyond those required to avoid interference and to ensure public safety.

II. Spectrum for Each License

In order to provide moderate speed (ISDN-like) data rates for Internet access to a substantial percentage of the population (e.g., 4 to 8%), it is estimated that at least 10 MHz of spectrum would be required. Thus, Bellcore recommends that the Commission assign 10 MHz licenses and allow carriers to obtain more than one license in each license area, subject to other spectrum caps that the Commission deems necessary. Bellcore further recommends that the 10 MHz licenses be paired (5 MHz in the lower band and 5 MHz in the upper band) in order to allow for the widest range of uses of the spectrum. That is, pairing, while not necessary for the wide-area Internet application, might be desirable for wireless loop and other voice applications, and these applications should not be precluded by the rules.

III. Disaggregation and Partitioning

Bellcore believes that the WCS rules should allow a licensee to transfer the license for all or a portion of its spectrum in a given geographic area to another party. Further, to facilitate the establishment of community networks for portable Internet access, geographic partitioning should be allowed along county lines. Partitioning along county lines would strike an acceptable balance between meeting market needs and minimizing the administrative burden on the Commission. For similar reasons, we agree with the Commission's proposal to allow WCS licensees to franchise portions of their spectrum and geographic service areas on a leased basis, and we recommend that there be no minimum amount of spectrum or any particular geographic area for such leasing. This

would enable small companies to provide a wireless Internet access service to one or more communities as demand warrants.

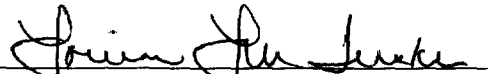
IV. Conclusion

In summary, Belcore applauds the Commission's action to assign spectrum for WCS and believes that portable access to the Internet for web browsing and Internet access among other activities, will be important uses of this spectrum. The spectrum should be allocated and licensed in a manner that will facilitate this new and novel application, as well as support more traditional applications such as circuit-switched voice and data services.

Respectfully submitted,

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